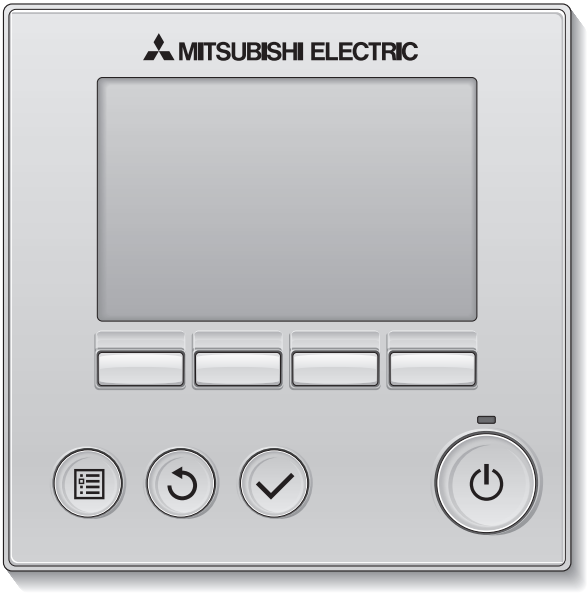
MITSUBISHI ELECTRIC

CITY MULTI Control System
and Mitsubishi Mr. Slim Air Conditioners

MA Remote Controller PAR-31MAA

Simple Operation Manual



Prior to use, thoroughly read the instructions in this manual to use the product correctly.
Retain for future reference.
Make sure that this manual, CD-ROM, and the Installation Manual are passed on to any future users.
To ensure safety and proper operation of the remote controller, the remote controller should only be installed by qualified personnel.

Safety precautions

- Thoroughly read the following safety precautions before using the unit.
- Observe these precautions carefully to ensure safety.

⚠ **WARNING**	Indicates a risk of death or serious injury.
⚠ **CAUTION**	Indicates a risk of serious injury or structural damage.

- After reading this manual, pass it on to the end user to retain for future reference.
- Keep this manual for future reference and refer to it as necessary. This manual should be made available to those who repair or relocate the controller. Make sure that the manual is passed on to any future users.
- For information not contained in this booklet, please refer to the Instruction Book on the CD-ROM that is supplied with the Remote Controller.

General precautions

⚠ WARNING

Do not install the unit in a place where large amounts of oil, steam, organic solvents, or corrosive gases, such as sulfuric gas, are present or where acidic/alkaline solutions or sprays are used frequently. These substances can compromise the performance of the unit or cause certain components of the unit to corrode, which can result in electric shock, malfunctions, smoke, or fire.

To reduce the risk of shorting, current leakage, electric shock, malfunctions, smoke, or fire, do not wash the controller with water or any other liquid.

To reduce the risk of electric shock, malfunctions, smoke or fire, do not operate the switches/buttons or touch other electrical parts with wet hands.

When disinfecting the unit using alcohol, ventilate the room adequately. The fumes of the alcohol around the unit may cause a fire or explosion when the unit is turned on.

To reduce the risk of injury or electric shock, before spraying a chemical around the controller, stop the operation and cover the controller.

To reduce the risk of injury or electric shock, stop the operation and switch off the power supply before cleaning, maintaining, or inspecting the controller.

If any abnormality (e.g., burning smell) is noticed, stop the operation, turn off the power switch, and consult your dealer. Continued use of the product may result in electric shock, malfunctions, or fire.

Properly install all required covers to keep moisture and dust out of the controller. Dust accumulation and water can cause electric shock, smoke, or fire.

⚠ CAUTION

To reduce the risk of fire or explosion, do not place flammable materials or use flammable sprays around the controller.

To reduce the risk of damage to the controller, do not directly spray insecticide or other flammable sprays on the controller.

To reduce the risk of environmental pollution, consult an authorized agency for proper disposal of remote controller.

To reduce the risk of electric shock or malfunctions, do not touch the touch panel, switches, or buttons with a pointy or sharp object.

To reduce the risk of injury and electric shock, avoid contact with sharp edges of certain parts.

To avoid injury from broken glass, do not apply excessive force on the glass parts.

To reduce the risk of injury, wear protective gear when working on the controller.

Precautions for moving or repairing the controller

⚠ WARNING

The controller should be repaired or moved only by qualified personnel. Do not disassemble or modify the controller.
Improper installation or repair may cause injury, electric shock, or fire.

⚠ CAUTION

To reduce the risk of shorting, electric shock, fire, or malfunction, do not touch the circuit board with tools or with your hands, and do not allow dust to accumulate on the circuit board.

Additional precautions

To avoid damage to the controller, use appropriate tools to install, inspect, or repair the controller.

This controller is designed for exclusive use with the Building Management System by Mitsubishi Electric. The use of this controller for with other systems or for other purposes may cause malfunctions.

To avoid discoloration, do not use benzene, thinner, or chemical rag to clean the controller. To clean the controller, wipe with a soft cloth soaked in water with mild detergent, wipe off the detergent with a wet cloth, and wipe off water with a dry cloth.

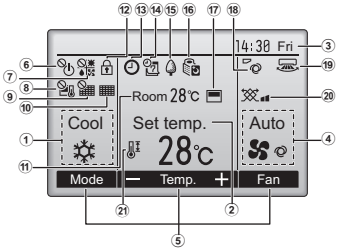
To avoid damage to the controller, provide protection against static electricity.

Names and functions of controller components

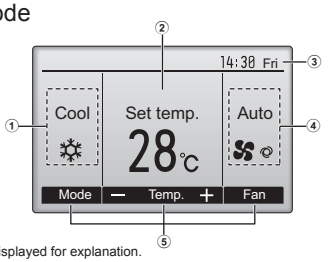
Display

The main display can be displayed in two different modes: "Full" and "Basic."
The factory setting is "Full."

Full mode



Basic mode



* All icons are displayed for explanation.

① Operation mode
Indoor unit operation mode appears here.

② Preset temperature
Preset temperature appears here.

③ Clock (See the Installation Manual.)
Current time appears here.

④ Fan speed
Fan speed setting appears here.

⑤ Button function guide
Functions of the corresponding buttons appear here.

⑥
Appears when the ON/OFF operation is centrally controlled.

⑦
Appears when the operation mode is centrally controlled.

⑧
Appears when the preset temperature is centrally controlled.

⑨
Appears when the filter reset function is centrally controlled.

⑩
Indicates when filter needs maintenance.

⑪ Room temperature (See the Installation Manual.)
Current room temperature appears here.

⑫
Appears when the buttons are locked.

⑬
Appears when the On/Off timer, Night setback, or Auto-off timer function is enabled.

appears when the timer is disabled by the centralized control system.

⑭
Appears when the Weekly timer is enabled.

⑮
Appears while the units are operated in the energy-save mode.

⑯
Appears while the outdoor units are operated in the silent mode.

⑰
Appears when the built-in thermistor on the remote controller is activated to monitor the room temperature (⑪).
appears when the thermistor on the indoor unit is activated to monitor the room temperature.

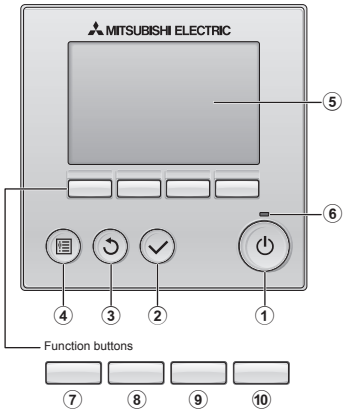
⑱
Indicates the vane setting.

⑲
Indicates the louver setting.

⑳
Indicates the ventilation setting.

㉑
Appears when the preset temperature range is restricted.

Controller interface



① ON/OFF button
Press to turn ON/OFF the indoor unit.

② SELECT button
Press to save the setting.

③ RETURN button
Press to return to the previous screen.

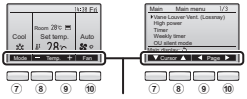
④ MENU button
Press to bring up the Main menu.

⑤ Backlit LCD
Operation settings will appear.
When the backlight is off, pressing any button turns the backlight on and it will stay lit for a certain period of time depending on the screen.

⑥ ON/OFF lamp
This lamp lights up in green while the unit is in operation. It blinks while the remote controller is starting up or when there is an error.

The functions of the function buttons change depending on the screen. Refer to the button function guide that appears at the bottom of the LCD for the functions they serve on a given screen.
When the system is centrally controlled, the button function guide that corresponds to the locked button will not appear.

Main display **Main menu**



⑦ Function button F1
Main display: Press to change the operation mode.
Main menu: Press to move the cursor down.

⑧ Function button F2
Main display: Press to decrease temperature.
Main menu: Press to move the cursor up.

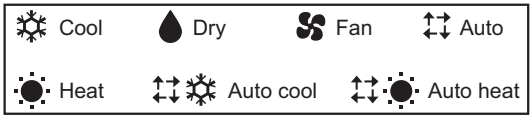
⑨ Function button F3
Main display: Press to increase temperature.
Main menu: Press to go to the previous page.

⑩ Function button F4
Main display: Press to change the fan speed.
Main menu: Press to go to the next page.

- When the backlight is off, pressing any button turns the backlight on and does not perform its function. (except for the ON/OFF button)
- Most settings (except ON/OFF, mode, fan speed, temperature) can be made from the Menu screen.

Basic operations

Operation mode icons

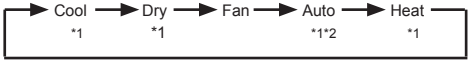


Turning ON and selecting operation mode

1 Press button ① (ON/OFF).

2 Press button ⑦ (F1) to go through the operation modes.

The ON/OFF lamp and the LCD will light up.



*1 Operation modes that are not available to the connected indoor unit models will not appear on the display.
*2 Single or dual set points will appear, depending on the indoor unit model.
* Interlocked operation is performed in all the operation modes when the ventilation unit is interlocked.

Preset temperature setting

Preset temperature will be displayed either in Celsius in 0.5- or 1-degree increments, or in Fahrenheit, depending on the indoor unit model and the display mode setting on the remote controller.

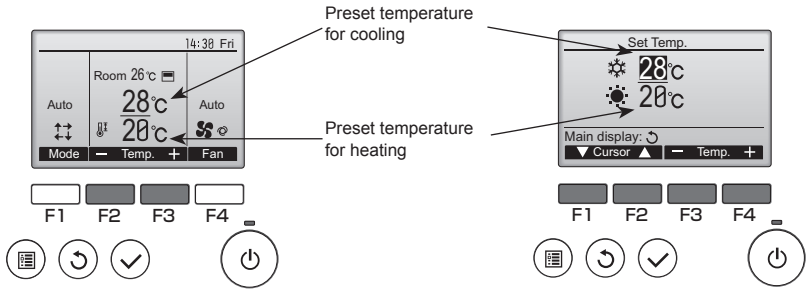
<Cool, Dry, Heat, and Auto (single set point)>

Press button ⑧ (F2) to decrease the preset temperature.
Press button ⑨ (F3) to increase the preset temperature.

<Auto (dual set point)>

1 Press button ⑧ (F2) or ⑨ (F3).

2 Press button ⑦ (F1) or button ⑧ (F2) to move the cursor to the desired temperature setting (cooling or heating).
Press button ⑨ (F3) to decrease the selected temperature, and ⑩ (F4) to increase.



Operation mode	Preset temperature range
Cool/Dry	19 ~ 30 ºC (67 ~ 87 ºF) *1
Heat	17 ~ 28 ºC (63 ~ 83 ºF) *1
Auto (Single set point)	19 ~ 28 ºC (67 ~ 83 ºF) *1
Auto (Dual set points)	[Cool] Preset temperature range for the Cool mode [Heat] Preset temperature range for the Heat mode *2
Fan/Ventilation	Not settable

* The temperature range restriction setting will be applied preferentially, if any. If the setting value is outside of the range, a message "Temp. range locked" will appear. Refer to the Instruction Book of the remote controller for details.

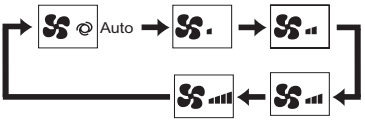
*1 The settable temperature range varies with the model of indoor units.

*2 The preset temperature settings for cooling and heating in the Auto (dual set point) mode are used by the Cool/Dry and Heat modes.
The preset temperatures for cooling and heating in the Auto (dual set point) mode can be set to meet the conditions below:
- Preset cooling temperature is higher than preset heating temperature.
- The minimum temperature difference requirement between cooling and heating preset temperatures (varies with the models of indoor units connected) is met.

Fan speed setting

Press button ⑩ (F4) to go through the fan speed.

* The number of available fan speeds depends on the model.



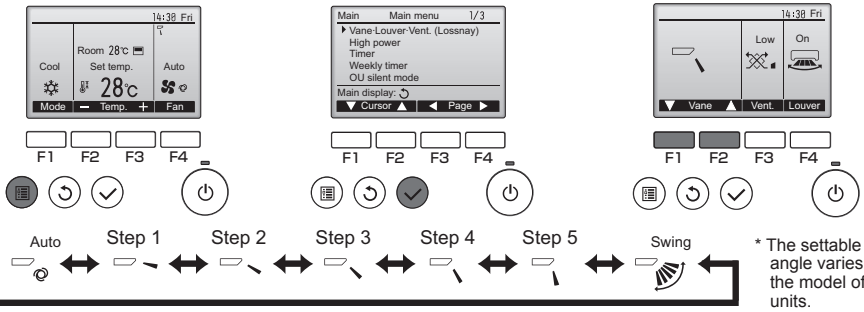
<Note>
The actual fan speed will be different from the fan speed displayed on the LCD when one of the following conditions is met.
- While "Standby" or "Defrost" is displayed
- When the room temperature is higher than the preset temperature during the heating mode
- Right after the heating operation (during stand by for switching the operation mode)
- During the dry mode

Vane setting

1 Press button ④ (MENU).

2 "Vane•Louver•Vent.(Lossnay)" is selected. Press button ② (SELECT).

3 Press button ⑦ (F1) or ⑧ (F2) to change the vane angle.



* The settable vane angle varies with the model of indoor units.

<Note>
The actual vane angle will be different from the vane angle displayed on the LCD when one of the following conditions is met.
- While "Standby" or "Defrost" is displayed
- The room temperature is higher than the preset temperature during the heating mode
- Right after the heating operation (during stand by for switching the operation mode)

Automatic cooling/heating operation

1 Press button ① (ON/OFF).

2 Press button ⑦ (F1) to display the operation mode "Auto".

<Auto (single set point)>

When the room temperature is higher than the preset temperature, cooling operation starts.
When the room temperature is lower than the preset temperature, heating operation starts.

* The current operation mode ("Auto cool" or "Auto heat") will be displayed after the mode is determined. If "Display/non-display of COOL/HEAT during AUTO mode" has been set to "Non-display" while making the initial settings, only "Auto" will be displayed. Refer to the Installation Manual for details about initial settings for the remote controller.

<Auto (dual set point)>

When the room temperature is higher than the preset cooling temperature, cooling operation starts.
When the room temperature is lower than the preset heating temperature, heating operation starts.

* When the operation mode is set to the Auto (dual set point) mode, only "Auto" will appear on the display, even if the display setting of "Auto cool/Auto heat" is enabled.

Ventilation operation

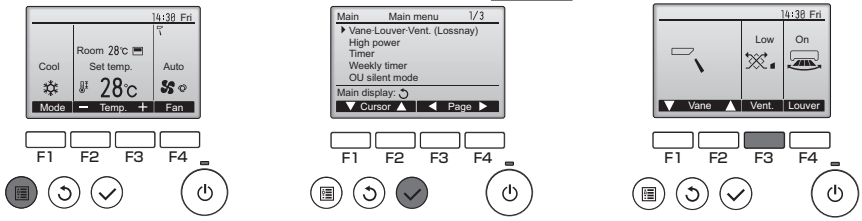
<When performing an interlocked operation of the ventilation unit with the indoor unit>
Press button ① (ON/OFF) to turn both the indoor unit and the ventilation unit on.

<When operating the ventilation unit individually>

1 Press button ④ (MENU).

2 "Vane•Louver•Vent.(Lossnay)" is selected. Press button ② (SELECT).

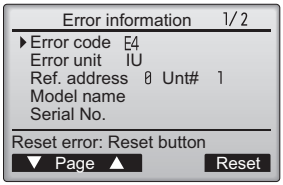
3 Press button ⑨ (F3) to change the fan speed.



Indoor unit fan may operate even when the ventilation unit is operated individually, depending on the models of the indoor unit and the ventilation unit.

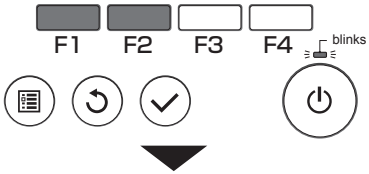
Troubleshooting

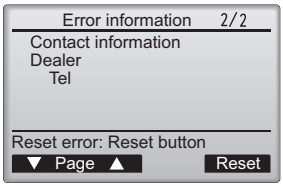
When an error occurs, the following screen will appear.
Check the error status, stop the operation, and consult your dealer.



Error code, error unit, refrigerant address, unit model name, and serial number will appear.
The model name and serial number will appear only if the information have been registered.

Press button ⑦ (F1) or ⑧ (F2) to go to the next page.

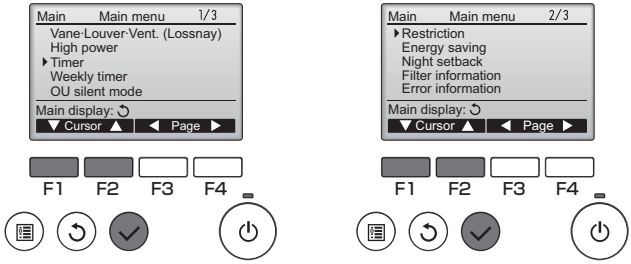




Contact information (dealer's phone number) will appear if the information have been registered.

Timer, Weekly timer, Energy saving

The settings for Timer, Weekly timer, and Energy saving operation can be made from the remote controller.
Press button ④ (MENU) to go to the Main menu, and move the cursor to the desired setting with button ⑦ (F1) or ⑧ (F2). Refer to the Instruction Book of the remote controller for further information.



Timer

- On/Off timer

  Operation On/Off times can be set in 5-minute increments.
- Auto-Off timer

  Auto-Off time can be set to a value from 30 to 240 in 10-minute increments.

Weekly timer

Operation On/Off times for a week can be set.

Up to eight operation patterns can be set for each day.

Energy saving

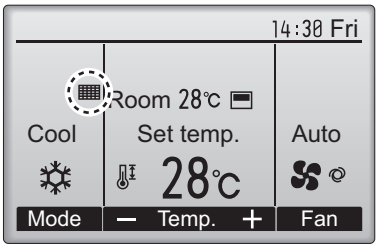
- Automatic return to the preset temperature

  The units operate at the preset temperature after performing energy-save operation for a preset time period.
  The preset time can be set to a value from 30 to 120 in 10-minute increments.
- Setting the energy-saving operation schedule

  The start/stop times to operate the units in the energy-save mode for each day of the week and the energy-saving rate can be set.
  Up to four operation patterns can be set for each day.
  The times can be set in 5-minute increments.
  The energy-saving rate range is 0% and 50 to 90% in 10% increments.

Maintenance

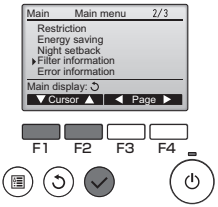
Filter information



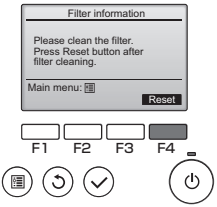
will appear on the Main display in the Full mode when it is time to clean the filters.

Resetting the filter sign

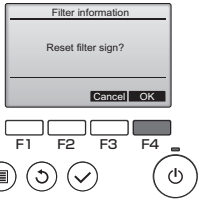
1 Select "Filter information" from the Main menu and press button ② (SELECT).



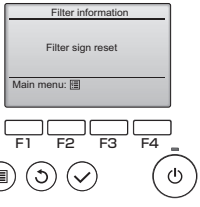
2 Press button ⑩ (F4) to reset filter sign.



3 Select "OK" with button ⑩ (F4).



4 A confirmation screen will appear.



<Note>

- Make sure to clean the filters before resetting filter sign. When the filter sign is reset, the cumulative operation time of the unit will be reset.
- If two or more indoor units of different models are connected, the filter sign will appear when the filter on one of the indoor units is due for cleaning. (long life filter: 2500 hours, general filter: 100 hours)
  When the filter sign is reset, the cumulative operation time of all units will be reset.
- The filter sign is scheduled to appear after a certain duration of operation, based on the premise that the indoor units are installed in a space with ordinary air quality. Depending on the air quality, the filter may require more frequent cleaning.

This product is designed and intended for use in the residential, commercial, and light-industrial environment.

The product at hand is based on the following EU regulations:
• Low Voltage Directive 2006/95/EC
• Electromagnetic Compatibility Directive 2004/108/EC

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